IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 13-15 in accordance with the following:

1-12. (Cancelled)

13. (Currently Amended) A numerical control method that uses a numerical control device for a machine, the machine having at least three axes of linear motion, a first axis of rotation for rotating a tool head, and a second axis of rotation for rotating the tool head, the second axis of rotation being arranged above the first axis of rotation, said method comprising:

obtaining a first actual tool length vector for which a tool length vector has been corrected, using a transformation matrix that is made from a reference position at which there is no mechanical error in the turning center of a spindle and an amount of misalignment of an actual turning center of the spindle from the reference position of the turning center of the spindle;

rotating said first actual tool length vector by ~~the~~an amount ~~corresponding to the~~in correspondence with an instruction for the second axis of rotation, ~~using~~by multiplying the first actual tool length vector by a transformation matrix that is made from a reference position at which there is no mechanical error in the second axis of rotation, an amount of misalignment of ~~the~~an actual second axis of rotation from the reference position, and an instruction position for the second axis of rotation, thereby obtaining a second actual tool length vector for which the misalignment of the second axis of rotation has been corrected;

rotating said second actual tool length vector by ~~the~~an amount ~~corresponding to the~~in correspondence with an instruction for the first axis of rotation, ~~using~~by multiplying the second actual tool length vector by a transformation matrix that is made from a reference position at which there is no mechanical error in the first axis of rotation, an amount of misalignment of the actual second axis of rotation and ~~the~~an actual first axis of rotation, an amount of misalignment of the actual first axis of rotation from the reference position of the first axis of rotation, and an instruction position for the first axis of rotation, thereby obtaining a third

actual tool length vector for which the misalignment of the first axis of rotation has been corrected;

adding an instruction position vector and workpiece origin offset vector to the third actual tool length vector to obtain a machine position; and

driving the axes of linear motion and the ~~axes~~first axis of rotation and the second axis of rotation to the machine position thus obtained.

14. (Currently Amended) A numerical control method that uses a numerical control device for a machine, the machine having at least three axes of linear motion, a first axis of rotation for rotating a table, and a second axis of rotation for rotating the table, the second axis of rotation being arranged above the first axis of rotation, said method comprising:

adding, to an instruction position in a table coordinate system, an offset of ~~the~~an origin of the table coordinate system to obtain an instruction position in a machine coordinate system;

rotating the instruction position in ~~a~~the machine coordinate system by an amount ~~corresponding to~~in correspondence with an instruction for the second axis of rotation, by multiplying a vector of the instruction position in the machine coordinate system by~~using~~ a transformation matrix that is made from a reference position at which there is no mechanical error in the second axis of rotation, an amount of misalignment of ~~the~~an actual second axis of rotation from the reference position, and an instruction position for the second axis of rotation, thereby obtaining a rotational position ~~rotated by~~of the second axis of rotation for which the misalignment of the second axis of rotation has been corrected;

rotating the rotational position of the second axis of rotation by an amount ~~corresponding to~~in correspondence with an instruction for the first axis of rotation, by multiplying a vector of the rotational position of the second axis of rotation by~~using~~ a transformation matrix that is made from a reference position at which there is no mechanical error in the first axis of rotation, an amount of misalignment of ~~the~~an actual first axis of rotation from the reference position, and an instruction position for the first axis of rotation, thereby obtaining a rotational position ~~rotated by~~of the first axis of rotation for which the misalignment of the first axis of rotation has been corrected;

adding a tool length vector to the rotational position of the first axis of rotation to obtain a machine position; and

driving the axes of linear motion and the ~~axes~~first axis of rotation and the second axis of rotation to the machine position thus obtained.

15. (Currently Amended) A numerical control method that uses a numerical control device for a machine, the machine having at least three axes of linear motion, at least one axis of rotation for a tool head, and at least one axis of rotation for a table, said method comprising:

adding, to an instruction position in a table coordinate system, an offset of ~~the~~an origin of the table coordinate system to obtain an instruction position in a machine coordinate system;

rotating the instruction position in ~~a~~the machine coordinate system ~~by an amount corresponding to~~in correspondence with an instruction for the ~~second~~ axis of rotation for ~~a~~the table, by multiplying a vector of the instruction position in the machine coordinate system by~~using~~ a transformation matrix that is made from a reference position at which there is no mechanical error in the axis of rotation for ~~a~~the table, an amount of misalignment of ~~the~~an actual axis of rotation for the table from the reference position, and an instruction position for the axis of rotation for ~~a~~the table, thereby obtaining a rotational position ~~rotated by~~of the axis of rotation for ~~a~~the table for which the misalignment of the axis of rotation for ~~a~~the table has been corrected;

rotating ~~the~~a tool length vector of the tool head in correspondence with~~by an amount corresponding to~~ an instruction for the axis of rotation for ~~a table~~the tool head, by multiplying the tool length vector by~~using~~ a transformation matrix that is made from a reference position at which there is no mechanical error in the axis of rotation for ~~a~~the tool head, an amount of misalignment of ~~the~~an actual axis of rotation for the tool head from the reference position, and an instruction position for the axis of rotation for ~~a~~the tool head, thereby obtaining a rotational position ~~rotated by~~of the axis of rotation for ~~a~~the tool head for which the misalignment of the axis of rotation for ~~a~~the tool head has been corrected;

obtaining a machine position in accordance with the rotational position of the axis of rotation for ~~a~~the table and the rotational position of the axis of rotation for ~~a~~the tool head; and

driving the axes of linear motion and the ~~axes~~ at least one axis of rotation for the tool head and the at least one axis of rotation for the table to the machine position thus obtained.